

## **INFORMATION ITEM**

### **Quarterly Report from the Delta Watermaster**

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**Summary:** As required by the Delta Reform Act, Delta Watermaster Michael George will make his regular report to the Council. He will update the Council on consumptive use and emerging issues in Delta water rights.

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### **Background**

The State Water Resources Control Board (Water Board), as the State's principal water resources regulatory agency, has statutory authority to implement and enforce many types of regulatory policies and recommendations that help to implement the Delta Plan's policies and recommendations. Water Code section 85230(d) directs the State's Delta Watermaster to submit regular reports to the Water Board and to the Council on water issues.

At today's meeting, Delta Watermaster Michael George will update the Council on an ongoing study of consumptive water use in the Delta, new water rights study initiatives (fallowing, bathymetry, diversion measurement, etc.), systematic improvements in data collection (including efforts to increase regulatory compliance), consolidation of lessons learned from the recent drought, and emerging issues in Delta water rights (untangling riparian from pre-1914 water rights, identifying water demands for habitat restoration, etc.).

### **Consumptive Use Study**

The Delta is both a transfer point for water stored in reservoirs on upstream tributaries and a source of otherwise free-flowing water for in-Delta water-rights holders. While the amount of water diverted from the Delta by the State and federal water projects is well known, less is known about the amount of water taken and consumptively used (meaning not otherwise returned to the Delta in forms such as waste flow or runoff) by local in-Delta diverters.

Given the State's system of cascading water rights, in which upstream return flows are factored into downstream water rights, measuring and understanding consumptive use within the Delta is important not only to farmers but also to water facility managers, to water rights regulators and to those seeking to protect the Delta's human and natural ecosystem.

In February 2015, the Delta Watermaster convened State and federal agencies (including the Council) as well as a large number of water users inside and outside of the Delta to jointly sponsor a rigorous comparative investigation of the several methods for measuring consumptive use, the calibration of and among these methods in the

unique settings within the Delta; and the cost, effort and reliability of applying each method.

The study, led by the Center for Watershed Sciences at the University of California at Davis, covers the entire legal Delta, plus a small amount of surrounding areas. The land use survey and preliminary field campaign were initiated during the 2015 growing season; additional field work, remote sensing, and crop change analyses were conducted during the 2016 growing season; and the final peer-reviewed report of the study will be completed in 2017.

### **Emerging issues in Delta water rights**

One of the foundations of California's water rights system is the idea of appropriative seniority, or "first in time, first in right." Because the Delta was developed from its natural state into an agricultural center in the mid-1800s, it has some of the oldest water rights in California.

But it doesn't end there, as layers of overlapping complexity not unlike those cited by scientists in the 2015 *Delta Challenges* report make Delta water rights a "wicked problem", too.

When California became a state, it adopted the riparian system from English common law. In this system, water is allocated among those who possess land adjacent to a water source. Later, California overlaid the priority system. Blending these two systems creates a degree of confusion and difficulty with respect to orderly administration of water rights, because – especially during droughts – the two systems treat shortages differently.

Among appropriators "first in time, first in right" means "last in line, first cut"; for riparians, however, it's "correlative share," where everyone gets cut equally. Managing both of those systems side by side in a complicated physical setting like the Delta creates a lot of complexity and confusion.

Three other factors add to the complexity: 1) the Delta is used as a conveyance system, in which previously stored water is released for transit through the Delta to export pumps or to maintain a fresh water pool in interior parts of the Delta; 2) the timing and amount of water flowing into the Delta is acknowledged to be at least a major factor in the health of the Delta ecosystem; and 3) the Delta is a tidal zone and the amount of tidal water that moves back and forth through the straits connecting San Francisco Bay to the interior Delta is huge compared to the amount of water that flows in all the streams that come into the Delta.

The Watermaster will discuss efforts to better understand and begin to address complexities within the Delta water rights system, especially related to drought-caused shortages.

### **Fiscal Information**

Not applicable.

**List of Attachments**

None.

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